1530 11



OIPE

DATE: 05/31/2002 RAW SEQUENCE LISTING TIME: 12:15:56 PATENT APPLICATION: US/10/082,671

Input Set : A:\Xen-001.app

Output Set: N:\CRF3\05312002\J082671.raw



```
3 <110 > APPLICANT: DAHIYAT, BASSIL
              LI, MIN
      4
      6 <120> TITLE OF INVENTION: USE OF NUCLEIC ACID LIBRARIES TO CREATE TOXICOLOGICAL
              PROFILES
      9 <130 - FILE REFERENCE: XEN/001
     11 < 140 · CURRENT APPLICATION NUMBER: 10/082,671
C+> 12 <141> CURRENT FILING DATE: 2002-05-17
     14 - 150 > PRIOR APPLICATION NUMBER: 60/270,781
     15 <151> PRIOR FILING DATE: 2001-02-22
                                                                ENTERED
     17 <160 - NUMBER OF SEQ ID NOS: 58
     19 <170> SOFTWARE: PatentIn Ver. 2.1
     21 <210> SEQ ID NO: 1
     22 <211 > LENGTH: 9
     23 <212 > TYPE: PRT
     24 - 213 > ORGANISM: Artificial Sequence
     26 <220 > FEATURE:
     27 < 223 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic
               peptide
     28
     30 <220 > FEATURE:
     31 .221 > NAME/KEY: MOD_RES
     32 < 222 > LOCATION: (1)..(3)
     33 <223 > OTHER INFORMATION: Variable amino acid
     35 <220 > FEATURE:
     36 <221 > NAME/KEY: MOD_RES
     37 <222> LOCATION: (6)
     38 <223 > OTHER INFORMATION: Variable amino acid
     40 < 220 > FEATURE:
     41 + 221 > NAME/KEY: MOD_RES
     42 + 222 > LOCATION: (8)..(9)
     43 \times 273 \times OTHER INFORMATION: Variable amino acid
     45 . 400 > SEQUENCE: 1
W--> 46 Xaa Xaa Xaa Pro Pro Xaa Pro Xaa Xaa
      47
         1
      50 - 210 - SEQ ID NO: 2
      51 -211> LENGTH: 20
      52 < 212 > TYPE: PRT
      53 - 213 > ORGANISM: Artificial Sequence
      55 < 220 > FEATURE:
      56 \times 223 > \text{OTHER} INFORMATION: Description of Artificial Sequence: Consensus
               sequence for SH-3 domain binding protein
      57
      59 < 220 > FEATURE:
      60 -221> NAME/KEY. MOD_RES
```

61 -222> LOCATION: (3)..(7)

DATE: 05/31/2002

TIME: 12:15:56

```
PATENT APPLICATION: US/10/082,671
                    Input Set : A:\Xen-001.app
                    Output Set: N:\CRF3\05312002\J082671.raw
    62 <223> OTHER INFORMATION: Unknown amino acid
    64 -220> FEATURE:
    65 <221> NAME/KEY: MOD_RES
    66 :(222> LOCATION: (13)
    67 <223> OTHER INFORMATION: Val, Ala, Gly, Leu, Pro or Arg
    69 <220> FEATURE:
    70 <221> NAME/KEY: MOD_RES
     71 <222> LOCATION: (15)..(16)
     72 <223> OTHER INFORMATION: Val, Ala, Gly, Leu, Pro or Arg
     74 <400> SEQUENCE: 2
10
     76 1
     78 Gly Gly Pro Pro
                     20
     82 <210> SEQ ID NO: 3
     83 <211> LENGTH: 63
     84 <212> TYPE: DNA
     85 <213> ORGANISM: Artificial Sequence
     87 <220> FEATURE:
     88 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
              oligonucleotide consensus sequence for SH-3 domain
              binding protein
     90
     92 <220> FEATURE:
     93 <221> NAME/KEY: modified_base
     94 + 222 > LOCATION: (7)..(8)
     95 <223> OTHER INFORMATION: a, c, t or g
     97 <220> FEATURE:
     98 <221> NAME/KEY: modified_base
     99 <222> LOCATION: (10)..(11)
     100 <223> OTHER INFORMATION: a, c, t or g
     102 <220> FEATURE:
     103 <221> NAME/KEY: modified_base
      104 - 222> LOCATION: (13)..(14)
      105 <223> OTHER INFORMATION: a, c, t or g
      107 <220> FEATURE:
      108 <221> NAME/KEY: modified_base
      109 <222> LOCATION: (16)..(17)
      110 <223> OTHER INFORMATION: a, c, t or g
      112 < 220> FEATURE:
      113 <221> NAME/KEY: modified_base
      114 <222> LOCATION: (19)..(20)
      115 <223> OTHER INFORMATION: a, c, t or g
      117 - 400> SEQUENCE: 3
 \psi Y-> 118 atgggcnnkn nknnknnknn kagacetetg eeteeasbkg ggsbksbkgg aggeeeacet 60
      119 taa
      122 <210> SEQ ID NO: 4
      123 ×211> LENGTH: 4
      124 < 212> TYPE: PRT
      125 < 213 > ORGANISM: Artificial Sequence
```

RAW SEQUENCE LISTING

RAW SEQUENCE LISTING

DATE: 05/31/2002

PATENT APPLICATION: US/10/082,671

TIME: 12:15:56

Input Set : A:\Xen-001.app

Output Set: N:\CRF3\05312002\J082671.raw

127 <220> FEATURE: 128 <223 OTHER INFORMATION: Description of Artificial Sequence: Linker consensus sequence 129 131 <400> SEQUENCE: 4 132 Gly Gly Gly Ser 133 1 136 <210> SEQ ID NO: 5 137 <211> LENGTH: 69 138 <212> TYPE: PRT 139 <213> ORGANISM: Artificial Sequence 141 <220> FEATURE: 142 < 223 > OTHER INFORMATION: Description of Artificial Sequence: Minibody presentation structure 145 <400> SEQUENCE: 5 146 Met Gly Arg Asn Ser Gln Ala Thr Ser Gly Phe Thr Phe Ser His Phe 10 5 147 1 149 Tyr Met Glu Trp Val Arg Gly Gly Glu Tyr Ile Ala Ala Ser Arg His 25 20 152 Lys His Asn Lys Tyr Thr Thr Glu Tyr Ser Ala Ser Val Lys Gly Arg 40 153 35 155 Tyr Ile Val Ser Arg Asp Thr Ser Gln Ser Ile Leu Tyr Leu Gln Lys 55 50 156 158 Lys Lys Gly Pro Pro 159 65 162 <210> SEO ID NO: 6 163 <211> LENGTH: 82 164 <212 > TYPE: DNA 165 <213> ORGANISM: Artificial Sequence 167 <220> FEATURE: 168 <223 > OTHER INFORMATION: Description of Artificial Sequence: Synthetic oligonucleotide 169 171 <400> SEQUENCE: 6 172 aggaaccect agtgatggag ttggccacte cetetetgcg egetegeteg etcaetgagg 60 82 173 ccqcccqqqc aaagcccggg cg 176 <210 > SEQ ID NO: 7 177 <211> LENGTH: 10 178 <212> TYPE: PRT 179 <213 > ORGANISM: Artificial Sequence 181 - 220 > FEATURE: 182 <223 > OTHER INFORMATION: Description of Artificial Sequence: Synthetic 183 linker 185 <400 > SEQUENCE: 7 186 Gly Gly Gly Gly Ser Gly Gly Gly Ser 190 <210> SEQ ID NO: 8 191 <211> LENGTH: 1866 192 <212> TYPE: DNA 193 <213 > ORGANISM: adeno-associated virus 2 195 -: 400 > SEQUENCE: 8

RAW SEQUENCE LISTING

DATE: 05/31/2002 TIME: 12:15:56 PATENT APPLICATION: US/10/082,671

Input Set : A:\Xen-001.app

Output Set: N:\CRF3\05312002\J082671.raw

```
196 atgccggggt tttacgagat tgtgattaag gtccccagcg accttgacga gcatctgccc 60
197 ggcatttctg acagctttgt gaactgggtg gccgagaagg aatgggagtt gccgccagat 120
198 totgacatgg atotgaatot gattgagcag gcaccootga cogtggcoga gaagotgcag 180
199 cgcgacttte tgacggaatg gcgccgtgtg agtaaggccc cggaggccct tttetttgtg 240
200 caatttgaga agggagaga ctacttccac atgcacgtgc tcgtggaaac caccggggtg 300
201 aaatccatgg ttttgggacg tttcctgagt cagattcgcg aaaaactgat tcagagaatt 360
202 taccgcggga tcgagccgac tttgccaaac tggttcgcgg tcacaaagac cagaaatggc 420
203 gccggaggcg ggaacaaggt ggtggatgag tgctacatcc ccaattactt gctccccaaa 480
204 acccageetg agetecagtg ggegtggaet aatatggaae agtatttaag egeetgtttg 540
205 aatotcaegg agegtaaaeg gttggtggeg eageatetga egeaegtgte geagaegeag 600
206 gaycagaaca aagagaatca gaatcccaat tetgatgege eggtgateag atcaaaaact 660
207 teagecaggt acatggaget ggtegggtgg etegtggaca aggggattae eteggagaag 720
208 cayiggatee aggaggacea ggeeteatae ateteettea atgeggeete caactegegg 780
209 toccaaatca aggotgoott ggacaatgog ggaaagatta tgagootgao taaaaccgoo 840
210 cccgactace tggtgggcca gcagcccgtg gaggacattt ccagcaatcg gatttataaa 900
211 attttggaac taaacgggta cgatccccaa tatgcggctt ccgtctttct gggatgggcc 960
212 acgaaaaagt tcggcaagag gaacaccatc tggctgtttg ggcctgcaac taccgggaag 1020
213 accaacateg eggaggeeat ageceacact gtgeeettet aegggtgegt aaactggaee 1080
214 aatgagaact ttcccttcaa cgactgtgtc gacaagatgg tgatctggtg ggaggagggg 1140
215 aagatgaceg ccaaggtegt ggagteggee aaageeatte teggaggaag caaggtgege 1200
216 gtggaccaga aatgcaagte eteggeecag atagaccega etecegtgat egteacetee 1260
217 aacaccaaca tgtgcgccgt gattgacggg aactcaacga ccttcgaaca ccagcagccg 1320
218 ttgcaagacc ggatgttcaa atttgaactc accegecgte tggatcatga etttgggaag 1380
219 gtcaccaage aggaagteaa agacttttte eggtgggeaa aggateaegt ggttgaggtg 1440
270 gagcatgaat totacgtcaa aaagggtgga gccaagaaaa gacccgcccc cagtgacgca 1500
221 gatataagtg agcccaaacg ggtgcgcgag tcagttgcgc agccatcgac gtcagacgcg 1560
222 gaagettega teaactaege agacaggtae caaaacaaat gttetegtea egtgggeatg 1620
223 aatotgatgo tgtttocotg cagacaatgo gagagaatga atoagaatto aaatatotgo 1680
224 ttcactcacg gacagaaaga ctgtttagag tgctttcccg tgtcagaatc tcaacccgtt 1740
225 tetgtegtea aaaaggegta teagaaactg tgetacatte ateatateat gggaaaggtg 1800
226 ccagacgett gcactgcctg cgatetggte aatgtggatt tggatgactg catetttgaa 1860
 227 caataa
 230 <210> SEQ ID NO: 9
 231 <211> LENGTH: 621
 232 <212> TYPE: PRT
 233 <213> ORGANISM: adeno-associated virus 2
 235 <400> SEQUENCE: 9
 236 Met Pro Gly Phe Tyr Glu Ile Val Ile Lys Val Pro Ser Asp Leu Asp
                                          10
 237
     1
 239 Gly His Leu Pro Gly Ile Ser Asp Ser Phe Val Asn Trp Val Ala Glu
                                      25
                  20
 242 Lys Glu Trp Glu Leu Pro Pro Asp Ser Asp Met Asp Leu Asn Leu Ile
                                                      45
                                  40
              35
 245 Glu Gin Ala Pro Leu Thr Val Ala Glu Lys Leu Gln Arg Asp Phe Leu
                              55
 248 Thr Glu Trp Arg Arg Val Ser Lys Ala Pro Glu Ala Leu Phe Phe Val
                                              75
                          70
 251 Gln Phe Glu Lys Gly Glu Ser Tyr Phe His Met His Val Leu Val Glu
 252
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/082,671

DATE: 05/31/2002 TIME: 12:15:57

Input Set : A:\Xen-001.app

Output Set: N:\CRF3\05312002\J082671.raw

	Thr	Thr	Gly		Lys	Ser	Met	Val		Gly	Arg	Phe	Leu		Gln	Ile
.: 55				100					105					110		
	Arg	Glu		Leu	Ile	Gln	Arg		Tyr	Arg	Gly	He		Pro	Thr	Leu
≟ 58			115					120					125			
260	Pro	Asn	Trp	Phe	Ala	Val		Lys	Thr	Arg	Asn	Gly	Ala	Gly	Gly	Gly
261		130					135					140				
263	Asn	Lys	Val	Val	Asp	Glu	Cys	Tyr	Ile	Pro	Asn	Tyr	Leu	Leu	Pro	Lys
	145					150					155					160
266	Thr	Gln	Pro	Glu	Leu	Gln	Trp	Ala	Trp	Thr	Asn	Met	Glu	Gln	Tyr	Leu
267					165					170					175	
269	Ser	Ala	Cys	Leu	Asn	Leu	Thr	Glu	Arg	Lys	Arg	Leu	Val	Ala	Gln	His
270				180					185					190		
272	Leu	Thr	His	Val	Ser	Gln	Thr	Gln	Glu	Gln	Asn	l∵s	Glu	Asn	Gln	Asn
.:73			195					200					205			
275	Pro	Asn	Ser	Asp	Ala	Pro	Val	Ile	Arg	Ser	Lys	Thr	Ser	Ala	Arg	Tyr
276		210					215					220				
278	Met	Glu	Leu	Val	Gly	Trp	Leu	Val	Asp	Lys	Gly	Ile	Thr	Ser	Glu	Lys
279	225					230					235					240
281	Gln	Trp	Ile	Gln	Glu	Asp	Gln	Ala	Ser	Tyr	Ile	ser	Phe	Asn	Ala	Ala
282					245					250					255	
284	Ser	Asn	Ser	Arg	Ser	Gln	Ile	Lys	Ala	Ala	Leu	Азр	Asn	Ala	Gly	Lys
285				260					265					270		
287	Ile	Met	Ser	Leu	Thr	Lys	Thr	Ala	Pro	Asp	Tyr	Leu	Val	Gly	Gln	Gln
288			275					280					285			
290	Pro	Val	Glu	Asp	He	Ser	Ser	Asn	Arg	Ile	Tyr	≟∵s	I l.e	Leu	Glu	Leu
291		290					295					31)()				
293	Asn	Gly	Tyr	Asp	Pro	Gln	Tyr	Ala	Ala	Ser	Val	Phe	Leu	Gly	Trp	Ala
	305					310					315					320
296	Thr	Lys	Lys	Phe	Gly	Lys	Arg	Asn	Thr	Ile	Trp	ren	Phe	Gly	Pro	Ala
297					325					330					335	
299	Thr	Thr	Gly	Lys	Thr	Asn	Ile	Ala	Glu	Ala	Ile	Ala	His	Thr	Val	Pro
300				340					345					350		
302	Phe	Tyr	Gly	Cys	Val	Asn	Trp	Thr	Asn	Glu	Asn	Phe	orq	Phe	Asn	Asp
303			355					360					365			
305	Cys	Val	Asp	Lys	Met	Val	Ile	Trp	Trp	Glu	Glu	Gly	$\mathrm{L}_I^{}\mathtt{S}$	Met	Thr	Ala
306		370					375					380				
308	Lys	Val	Val	Glu	Ser	Ala	Lys	Ala	Ile	Leu	Gly	Gly	ser	Lys	Val	Arg
	385					390					395					400
311	Val	Asp	Gln	Lys	Cys	Lys	Ser	Ser	Ala	Gln	He	Asp	Pro			
312					4 () 5					410					415	
314	Ile	Val	Thr	Ser	Asn	Thr	Asn	Met	Cys	Ala	Val	He	Asp	Gly	Asn	Ser
315				420					425					430		
31.7	Thr	Thr	Phe	Glu	His	Gln	Gln		Leu	Gln	Asp	Arq	Met	Phe	Lys	Phe
318			435					440					445			
320	Glu	Leu	Thr	Arg	Arg	Leu		His	Asp	Phe	Gly	Lys	Val	Thr	Lys	Gln
321		450					455					460				
	Glu	Val	Lys	Asp	Phe	Phe	Arg	Trp	Ala	Lys		His	Val	Val	Glu	Val
	465					470					475					480
3.16	Glu	His	Glu	Phe	Tyr	Val	Lys	Lys	Gly	Gly	Ala	Lys	Lys	Arg	Pro	Ala

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/10/082,671

DATE: 05/31/2002 TIME: 12:15:58

Input Set : A:\Xen-001.app

Output Set: N:\CRF3\05312002\J082671.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,3,6,8,9

Seq#:2; Xaa Pos. 3,4,5,6,7,13,15,16

Seq#:3; N Pos. 7,8,10,11,13,14,16,17,19,20

Seq#:58; Xaa Pos. 3,4,5,6